

APPENDIX

4. (Amended) [The apparatus of claim 1, further comprising] An apparatus for electro-chemically depositing a metal film on a seed layer disposed on a substrate, comprising:

a substrate holder configured to hold a substrate;
an electrolyte cell configured to receive the substrate in a processing position;
an actuator connected to the substrate holder, the actuator being configured to adjustably position the substrate relative to the electrolyte cell; and
a sensor configured to sense [that senses the] an electric current density across the seed layer.

5. (Amended) [The apparatus of claim 1, wherein the] An apparatus for electro-chemically depositing a metal film on a seed layer disposed on a substrate, comprising:

a substrate holder configured to hold a substrate;
an electrolyte cell [further comprises] having a body portion and an overflow portion, the overflow portion defin[es]ing an opening for receiving the substrate in [its] a processing position[,]; and
an actuator connected to the substrate holder, the actuator being configured to adjustably position[s] the substrate relative to the body portion of the electrolyte cell.

6. (Amended) [The apparatus of claim 4, wherein the adjustably positioning comprises bowing the substrate] An apparatus for electro-chemically depositing a metal film on a seed layer disposed on a substrate, comprising:

a substrate holder configured to hold a substrate;
an electrolyte cell configured to receive the substrate in a processing position;
an actuator connected to the substrate holder, the actuator being configured to bow the substrate relative to the electrolyte cell.

10. (Amended) [The method of claim 7, wherein said adjusting the position comprises adjusting the bowing of the substrate] A method of controlling uniformity in a deposition depth of a metal film from the center of a seed layer on a substrate to the periphery of the seed layer, the method comprising:

inserting a substrate having a seed layer into an electrolyte cell; and
bowing the substrate relative to the electrolyte cell.

11. (Amended) The method of claim [7] 10, wherein [the] sensing the uniformity of the electric current density is performed after the substrate has been removed from the electrolyte cell.

12. (Amended) [The] A method [of claim 7, wherein the adjusting the position comprises] for controlling uniformity of a deposition depth of a metal film from the center of a seed layer on a substrate to the periphery of the seed layer, the method comprising:

inserting a substrate having a seed layer into an electrolyte cell; and
adjusting the horizontal position of the substrate within the electrolyte cell.

16. (Amended) [The method of claim 13, wherein the] A method for electro-chemically depositing a metal film on a substrate having a metal seed layer, the method comprising:

disposing a substrate in an electrolyte cell [has] having a body portion and an overflow portion, the overflow portion defin[es]ing an opening for receiving the substrate in a processing position[.]; [the] and

adjustably positioning the substrate [is performed] relative to the body portion of the electrolyte cell.

17. (Amended) The method of claim [13] 16, wherein [the] adjustably positioning comprises adjusting the vertical height of the substrate.

22. (Amended) [The method of claim 19, wherein the adjustably positioning comprises] A method for controlling uniformity of deposition rate of a metal film on a substrate, the method comprising:

disposing a substrate in an electrolyte cell; and

adjusting the lateral position of the substrate relative to the electrolyte cell to control the deposition rate.

23. (Amended) [The method of claim 19, wherein the adjustably positioning comprises] A method for controlling uniformity of deposition rate of a metal film on a substrate, the method comprising:

disposing a substrate in an electrolyte cell; and

adjusting the curvature of the substrate relative to the electrolyte cell.

24. (Amended) The method of claim [19] 23, further comprising determining the uniformity of the deposition layer by measuring the thickness of the metal film.

25. (Amended) An apparatus for electro-chemically depositing a metal film on a substrate having a metal seed layer, comprising:

a substrate holder for holding the substrate;

an electrolyte cell [for receiving the substrate in a processing position, wherein the electrolyte cell further comprises] having a body portion and an overflow portion, the overflow portion defin[es]ing an opening for receiving [the substrate in its processing position, and the substrate holder adjustably positions the substrate relative to the body portion] the substrate in a processing position;

an actuator connected to the substrate holder for displacing the substrate holder in a substantially vertical direction to adjust the position of the substrate relative to the body portion of the electrolyte cell [to provide a desired uniformity of metal film deposition depth]; and

a metal deposition portion that provides for deposition of the metal film on the metal seed layer [on the substrate].